

## **STRUCTURE FOR WATER CONTROL**

Structure size will affect documentation needs. Small turnouts and checks usually won't require extensive design surveys and design data and specifications can be shown on the standard plan. The documentation requirements listed here are for non-standard plan structures.

### **Design Survey**

The following information shall be obtained and recorded in the field notes:

- a. Profile and cross sections of conveyance (adequate distance to establish water surface and ground control elevations).
- b. Site topography (field elevations, etc.).
- c. Location of physical features that may have an effect on construction.
- d. Soils classification and foundation investigation as needed.
- e. Resistivity survey, if required.
- f. Drainage area.

### **Design Data**

The following will be considered minimum in the design of a water control structure. The information shall be recorded in the design notes. Appropriate data will be transferred to the construction drawings.

- a. Capacity requirements.
- b. Ditch and structure hydraulics.
- c. Structural design.
- d. Material selection.
- e. Quantity computations.
- f. Geologic investigations.
- g. Records indicating SCS obligations regarding State and Federal regulations including NEP requirements have been met if they apply.

### **Drawings and Specifications**

The construction drawings shall include but will not be limited to the following

- a. Location map.
- b. Overall plan view of structure.
- c. Channel profile 100 feet upstream and downstream of structure.
- d. Structure details including sectional views.
- e. Reinforcing steel schedule (for concrete structures).
- f. Backfill material and borrow area.

- g. Table of quantities.

Practice specifications along with applicable “Items of Work and Construction Details” shall be provided for each item or phase of construction.

### **Layout Survey Notes**

The following information shall be recorded in the field notes:

- a. Centerline and slope stakes with offset hubs, as
- b. Required to outline construction intent.
- c. Grade, alignment and reference stakes for structures.

### **Compliance Checks**

The complexity of the structure will dictate the need for compliance checks during construction. All compliance checks shall be recorded in the field notes. Narratives of construction checks shall be recorded in the job diary or on a sheet in the field notes. Compliance checks shall include but will not be limited to the following:

- a. Profile of conveyance channel and related structure(s).
- b. Dimensions, alignment, and backfill of structures.
- c. Certification of reinforcing steel placement (for concrete structures).
- d. Adequacy of material or appurtenances.
- e. Quality of materials.
- f. Statement of compliance.

### **As—Built Plans**

As-built plans shall be prepared for all water control structures. These drawings shall reflect all significant changes in linear measurements, quantities, alignment or design changes. If there were no significant changes, the original drawings shall be marked as-built.

In the event standard plans were used for the water control structure and there were no significant changes, as-built plans will not be required. The compliance statement in the field notes shall refer to the applicable plan number.